



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,893	04/20/2004	Ronald J. Yaeger	P-B199-CIP	5851
7590 Mr. Ronald J. Yaeger 4201 Tomberra Way Dallas, TX 75220				
04/27/2009				
EXAMINER				
COLE, ELIZABETH M				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
04/27/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/828,893

Applicant(s)

YAEGER ET AL.

Examiner

Elizabeth M. Cole

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-17 and 19-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-17 and 19-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/19/09 has been entered.
2. Claims 1-2, 4-17, 19-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for the limitation that the continuous phase comprises amorphous polymers, that the continuous phase comprises one or more non-chlorinated cationic polymer (claims 17, 29), or that the cationic polymers comprise at least one cationic functional group or wherein the continuous phase has an overall cationic charge. The specification does not state whether the polymers are amorphous, crystalline or semi crystalline, does not contain the negative limitation regarding non-chlorinated cationic polymers, does not refer to cationic functional groups or to the polymer being a cationic polymer. The specification does state that preferred polymers comprise cationic groups, (paragraph 061). The specification at paragraph 0060 states that the "the choice of polymers that are generally cationic in nature" is taught in order to repel positively charged ions and particles in the water. However, this is not the same

as having a cationic charged or having cationic functional groups or an overall cationic charge.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-11, 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sterman et al, U.S. Patent no. 3,493,461. Sterman discloses a fibrous substrate such as fiber glass which is coated and impregnated with a polyvinyl chloride thermoplastic resin. It is noted that table 3 indicates that PVC resin has the claimed solubility parameters. Therefore, it is reasonable to presume that the PVC of Sterman would have the claimed properties. With regard to the intended use as an evaporative cooler, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In the instant case, since the claimed structures are the same, the structure of Sterman would be capable of use as an evaporative cooler. It is further noted that the recitation is found only in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are

able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

5. Claims 1-2, 13, 17, 19-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nose et al, U.S. Patent No. 5,068,142. Nose et al discloses a material comprising a fibrous material which is impregnated with a thermoplastic resin composition . The thermoplastic resin composition can be polyamides, polyacrylates, polyacetals, polyacrylonitrile, polycarbonates, polystyrenes, polyetherimides, etc. See col. 4, lines 20-31. The resin can further comprise additives such as pigments which would correspond to the claimed second phase. See col. 4, lines 49-54. With regard to the claimed properties and solubility parameters, etc., the specification discloses these resins as having suitable non polar solubility parameter, the polar solubility parameter, the hydrogen bond solubility parameter, the surface tension, interfacial tension, (see for example the discussion at Table 3 regarding polyacrylates. Therefore, since Nose discloses the same materials, it is reasonable to presume that the materials of Nose would meet the claimed property limitations. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112- 2112.02. Since Nose et al discloses a fibrous material impregnated with the resins set forth in the

specification, it is reasonable to expect that these resins have the same properties as the claimed resins.

6. With regard to the intended use as an evaporative cooler, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In the instant case, since the claimed structures are the same, the structure of Nose would be capable of use as an evaporative cooler. It is further noted that the recitation is found only in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

7.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2, 4-17, 19-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09141023. JP '023 discloses a filter material comprising a fibrous material such as fiber glass and a thermoplastic binder. The thermoplastic binder is

cationic and can be an acrylic ester copolymer, polyamide, fluoro-resin, etc. See paragraph 0015 of the machine translation. The specification discloses such resins as having suitable non polar solubility parameter, the polar solubility parameter, the hydrogen bond solubility parameter, the surface tension, interfacial tension, (see for example the discussion at Table 3 regarding polyacrylates. Therefore, since JP '023 discloses the same materials, it is reasonable to presume that the materials of JP '023 would meet the claimed property limitations. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP §§ 2112-2112.02. With regard to the intended use as an evaporative cooler, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In the instant case, since the claimed structures are the same, the structure of Sterman would be capable of use as an evaporative cooler. It is further noted that the recitation is found only in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural

limitations are able to stand alone. See *In re Hira*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

10. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nose et al, U.S. Patent No. 5,068,142. Nose et al discloses a fibrous material impregnated with a thermoplastic resin as set forth above. Nose et al differs from the claimed invention because it does not clearly set forth the claimed amounts of fibrous material and resin. However, it would have been obvious to one of ordinary skill in the art to have selected suitable amounts of fiber and resin in order to provide a material having the desired strength, etc.

11. Applicant's arguments filed 10/21/08 have been fully considered but they are not persuasive. Applicant argues that since polymers can be amorphous or crystalline that a specification which is silent as to whether the particular polymers employed are amorphous or crystalline can be relied on to provide support for an amendment to the claims limiting the polymer to an amorphous material. This argument is not persuasive. The fact that a particular material may have various different characteristics does not provide sufficient support for specifically reciting that the material has that particular characteristic. A fiber can have many lengths, but a specification which was silent as to fiber length could not then be relied on for support for a claim recitation of a particular length. The specification does not set forth the invention to convey to one skilled in the art that the particular polymer claimed was an amorphous polymer. Applicant argues that the person of skill in the art would know that polymers can be amorphous, semi-crystalline or crystalline. However, the issue is not whether thermoplastic polymers

would be known to the person of skill in the art as being one of amorphous, semi crystalline or crystalline. The issue is whether the specification reasonably conveys to the person skilled in the art that the continuous phase consists essentially of an amorphous cationic polymer. There is nothing on the record which shows that it does.

12. If Applicant contends that the discussion in the specification of particular parameters such as solubility parameters, etc. would establish that the polymers disclosed are amorphous to a person of skill in the art, Applicant needs to set forth why this is the case from scientific reasons, citations to pertinent data, etc.

13. Applicant's citation regarding thermoplastic polymers in general does not establish that in particular the person of skill in the art would have recognized the polymers set forth in the specification as amorphous rather than semi crystalline or crystalline. Therefore, the rejection is maintained.

14. Applicant's arguments that the specification provides support for overall cationic charge are not persuasive. The specification provides support for positively charged groups and polymers but not for the limitation for the overall cationic charge. The citation to the IUPAC Compendium provided by Applicant states that a cationic polymer is a polymer composed of positively charged macromolecules and equivalent amount of counter anions. That does not indicate that the overall charge would be positive. The citation provided refers to a material having an overall positive charge as a polyelectrolyte. The specification does not disclose polyelectrolytes. The specification discusses at paragraph 0060 of the published application that the polymers can be

generally cationic in nature. The specification does not disclose an overall cationic charge. Therefore, the rejection is maintained.

15. With regard to Polovina, Applicant's arguments are persuasive in view of the amendments to the claims and Declarations. New art rejections are set forth above.

16. The Declarations of Mr Galen Hartman under 37 CFR 1.132 filed 3/19/09 are sufficient to overcome the rejection of claims based upon Polovina, since the Declarations state that the structure of Polovina is thermosetting, not thermoplastic and since the Declarations state that the hydrogen bond solubility parameter of the Polovina reference is 12-24, while the instant claims recite a hydrogen bond solubility parameter of 0-7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

Application/Control Number: 10/828,893

Page 10

Art Unit: 1794

e.m.c